

valve 30 and/or a valve seat 32. Figure 3. Furthermore, in Shepherd, the valve 30 cooperates with the seat 32 to deliver ultrahigh-pressure liquid to the chamber 28 of the body 26. Column 3, lines 24-37; Figure 3. Thus, with respect to the general function and positioning of the components, the nozzle body 100 of the present application is equivalent to the body 26 in Shepherd; not to the inlet member 24 as the Examiner asserts. In addition, the cutting head 15 of the present application is equivalent to the lower body 42 of Shepherd; not to the nozzle body 26 as the Examiner implies.

Furthermore, as the Examiner recognizes, the mounting band 72 of Shepherd is comparable to the clamp 21 in the above application. Additionally, the Examiner references the numeral 52 when referring to the orifice location in Shepherd. However, numeral 52 calls out an abrasive supply line in Shepherd. Column 3, line 46. In Shepherd, the orifice location is indicated by numeral 38. Column 3, line 36.

It is in this light that the claims of the present application are contrasted from the teachings of Shepherd in the following discussion.

Claim Rejections Under 35 U.S.C. § 102(e).

The Examiner rejects claims 13, 18, and 28 as being anticipated by U.S. Patent No. 6,126,524, to Shepherd.

Claim 13 recites in part, a clamp positioned around the body of the cutting head, the clamp holding the cutting head when the nozzle body assembly is separated from the cutting head, thereby allowing access to the orifice location without removing the cutting head from the clamp. In contrast, in Shepherd, the mounting band 72 is attached to the body 26 (*i.e.*, nozzle body); not the lower body 42 (*i.e.*, cutting head). Accordingly, the band 72 of Shepherd must be removed from the nozzle body 26 before the user can remove the nozzle body 26 and access the orifice 38 of Shepherd. Therefore, it is not possible in Shepherd to access the orifice location 38 with the nozzle body 26 separated from the lower body 42 (*i.e.*, cutting head). Again, the mounting band 72 of Shepherd is not around the body of the cutting head 42, and also, the band 72 must be removed before the user can access the orifice location 38 in Shepherd. Even if the inlet member 24 is removable as the Examiner asserts, the user cannot access the orifice location 38 of Shepherd if the clamp 72 and body 26 are not removed. Thus, Shepherd fails to anticipate

every element of claim 13. Therefore, claim 13 and claims 14-22 and 24-28 which depend therefrom, are allowable over Shepherd.

Claim 18 recites that an upper guide coupled to the nozzle body vertically supports the nozzle body when the cutting head is removed from the clamp. In contrast, the upper guide or collar 68 of Shepherd is positioned above or upstream of the air control housing 34, which in turn is positioned above the body 26. Figures 2 and 3. Therefore, the collar 68 is not coupled to the nozzle body 26 in Shepherd and cannot vertically support the body 26 when the band 72 is removed. Accordingly, claim 18, in addition to being allowable for depending from claim 13, is also allowable because Shepherd fails to teach, suggest or motivate an upper guide coupled to and vertically supporting the nozzle body when the cutting head is removed from the clamp.

Claim 28 recites that the clamp is positioned around the body of the cutting head downstream of the orifice location. In contrast, the mounting band 72 in Shepherd is not positioned downstream of the orifice location 38; instead, in Shepherd, the band 72 is positioned upstream of the orifice location 38 because Shepherd states that the band 72 is attached to the body 26, which is positioned upstream of the orifice location 38. Column 4, lines 41-46; Figure 3. The Examiner references Figure 3 of Shepherd to provide basis for asserting that Shepherd anticipates claim 28 of the above application. While, the band 72 of Shepherd is not shown in Figure 3, viewing Figures 2 and 3 of Shepherd together, it is apparent that the band 72 is attached to the nozzle body 26 upstream of the lower body (or cutting head body) 42, which houses the orifice 38. Even if as the Examiner asserts, the orifice in Shepherd were located in the region called out by reference numeral 52, which it is not, the band 72 is still positioned upstream of the orifice location in Shepherd. Accordingly, Shepherd also fails to anticipate claim 28. Therefore, in addition to being allowable for depending from claim 13, claim 28 is also allowable because Shepherd fails to teach, suggest or motivate a clamp positioned around the body of the cutting head downstream of the orifice location.

The Examiner also rejects claims 39 and 43 for being anticipated by Shepherd. Claims 39 and 43 are allowable over Shepherd for the same reasons as those discussed above regarding allowability of claim 13. Therefore, claims 40-42 are allowable over Shepherd for depending from claim 39.

Claim Rejections Under 35 U.S.C. § 103(a).

The Examiner rejects claims 1, 3, 4, and 7 as being obvious over Shepherd in view of U.S. Patent No. 5,234,185, to Hoffman et al. Claim 1 recites that a clamp is positioned around the cutting head downstream of the orifice location. In contrast, as discussed in more detail above, the band 72 of Shepherd is attached to the nozzle body 26 upstream of the orifice location 38. Column 4, lines 41-46. Furthermore, Hoffman et al. do not fulfill this deficiency in Shepherd. Accordingly, claim 1 and claims 3-11 which depend directly, or through an intervening claim, from claim 1, are allowable over Shepherd in view of Hoffman et al.

Furthermore, in addition to being allowable for depending from claim 1, claims 4 and 7 are also allowable for the same reasons as discussed above in conjunction with claims 13 and 18, respectively. Hoffman et al. fail to fulfill these deficiencies in Shepherd.

The Examiner rejects claims 29, 30, and 32 as being obvious over Shepherd in view of Hoffman et al. Claim 29 is allowable over Shepherd in view of Hoffman et al. for the same reason as discussed above with respect to claim 1. Therefore, claims 30-36 are also allowable for depending from claim 29. In addition to being allowable for depending from claim 29, claim 30 is also allowable over Shepherd in view of Hoffman et al. for the same reasons as those discussed with respect to claim 13, and claim 32 is allowable over Shepherd in view of Hoffman et al. for the same reason as that discussed with respect to claim 18. Hoffman et al. fail to fulfill these deficiencies in Shepherd.

The Examiner rejects claim 39 as being obvious over Shepherd in view of U.S. Patent No. 3,877,334, to Gerber. Claim 39 is allowable over Shepherd in view of Gerber for the same reasons as those discussed above with respect to claim 13 and because Gerber fails to fulfill these deficiencies in Shepherd. Therefore, claims 40-42 are also allowable for depending from claim 39.

In addition to being allowable for depending from an allowable independent claim, the dependent claims in the present application may be also be allowable on their own merits. Applicants reserve the right to make arguments, not made here, in support of the dependent claims on their own merit as Applicants deem necessary.

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Reply to Office Action dated August 31, 2006

Applicants respectfully submit that all of the claims remaining in the application are now allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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